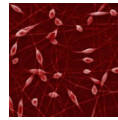


Dielectrics 2019

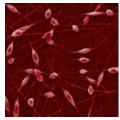
Programme

Thursday 11th April

- 08:45 **Joint session welcoming address (Closing of electrostatics/opening of dielectrics)**
Joint session 1: Dielectrics and Electrostatics I
Chair: S Hadjiloucas, University of Reading, UK
- 09:00 **Influence of electrode spacing on a symmetrical washer-type electrohydrodynamic conduction pump**
M Daaboul, University of Balamand, Lebanon
- 09:20 **Time resolved measurement of dielectric particles velocity in standing wave electric conveyor using PTV technique**
N Zouzou, Université de Poitiers, France
- 09:40 **Dielectric measurements for the examination of electrostatic charging of powders**
I Kiss, Budapest University of Technology & Economics, Hungary
- 10:00 **Phased-array metasurface modeling using the MoM-GEC method**
I Soltani, National Engineering School of Tunis, Tunisia
- 10:20 (Invited) **Electrical capacitance tomography for dielectric measurement**
W Yang, University of Manchester, UK
- 10:50 Refreshments and Exhibition - Pioneer room
- Joint session 2: Dielectrics and Electrostatics II**
Chair: N Green, University of Southampton, UK
- 11:30 (Plenary) **Oxide based memristive devices: current status of understanding and future prospects**
R Dittmann, Forschungszentrum Juelich, Germany
- 12:30 Lunch - Pioneer room
- Session 3: Manufacturing of complex dielectrics and novel applications**
Chair: C Elissalde, ICMCB-CNRS, France
- 13:30 (Invited) **Memristive technologies: a viable pathway for beyond Moore electronics and AI**
T Prodromakis, University of Southampton, UK
- 14:00 (Invited) **Electrocaloric effects in multilayer capacitors exceed magnetocaloric effects in prototype cooling devices**
N Mathur, University of Cambridge, UK



- 14:30 (Invited) **Dielectric meta materials using direct digital manufacturing**
G Mitchell, Institute Polytechnic of Leiria, Portugal
- 15:00 Refreshments and exhibition - Pioneer room
- Session 4: Microstructure and chemistry of composite dielectrics**
Chair: N Mathur, University of Cambridge, UK
- 15:30 (Invited) **Microstructure and chemistry in dielectric based ceramics and composites: Unveiling the potential of low temperature processing approaches**
C Elissalde, ICMCB-CNRS, France
- 16:00 (Invited) **Structural details of A-site substitution in LLTO perovskites. The importance of the amount of vacancies and its distribution on transport properties**
A Varez, Universidad Carlos III de Madrid, Spain
- 16:30 (Invited) **BaTiO₃-Bi(Zn_{1/2}Ti_{1/2})O₃ Relaxor materials: Role of non-stoichiometry**
D Cann, Oregon State University, USA
- 17:00 (Invited) **Microstructural imaging of grains and micron size defects of metallic structures using quantum well hall effect (QWHE) sensors**
M Missous, University of Manchester, UK
- 17:30 Close
- 19:00 Dinner at Zouk restaurant



Dielectrics 2019

Friday 12th April

Session 5: Interpretation of dielectrics responses

Chair: J Vij, University of Dublin, Ireland

- 09:00 (Invited) **The riddle of colossal permittivity**
S Hepplestone, University of Exeter, UK
- 09:30 (Invited) **Anomalous dielectric relaxation in the context of the debye model of escape of dipoles over a potential barrier**
W Coffey, University of Dublin, Ireland
- 10:00 (Invited) **A modified maxwell garnett model: hysteresis in phase change materials**
N Green, University of Southampton, UK
- 10:30 (Invited) **Finite element modelling: Studying the effect of microstructures in dielectric materials**
J Dean, University of Sheffield, UK
- 11:00 (Invited) **Analytical formula for the linear complex permittivity of isotropic polar fluids**
P Déjardin, Université de Perpignan via Domitia - Lamps, France

11:20 Refreshments - Pioneer room

Session 6: Measurement of dielectrics responses

Chair: W Coffey, University of Dublin, Ireland

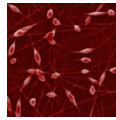
- 11:50 (Invited) **Measurements on low-loss dielectrics in the frequency range 1 to 70 MHz by using a Vector Network Analyser**
A Gregory, National Physical Laboratory, UK
- 12:20 (Invited) **Distortions in the structures of the twist bend nematic phase of a bent-core liquid crystal by electric field using dielectric spectroscopy**
J Vij, University of Dublin, Ireland
- 12:50 **New functionalities from ferroelectric domain walls**
M Gregg, Queen's University Belfast, UK

13:20 Lunch and poster session - Pioneer room

Session 7: Interpretation of dielectrics responses session II

Chair: S Hadjiloucas, University of Reading, UK

- 14:20 (Invited) **Understanding and controlling the dielectric response of porous materials**
M Ryder, Oak Ridge National Laboratory, USA



- 14:50 (Invited) **Relaxor behaviour and disorder in tetragonal tungsten bronzes**
F Morrison, University of St Andrews, UK
- 15:20 **Charged interfaces in ferroelectric materials**
M Maglione, University of Bordeaux, France
- 15:40 **Combination of voltage response method with non-contact electrostatic voltage measurement to determine the dielectric response of insulating materials**
Z Tamus, Budapest University of Technology & Economics, Hungary
- 16:00 **Potentialities of flexoelectric effect in soft polymer films for electromechanical applications**
B Guiffard, University of Nantes, France
- 16:20 **Correlation between structure with dielectric and ferroelectric properties for the lead-free electro-ceramics based on $\text{Ba}_{1-x}\text{Ca}_x\text{Ti}_{0.9}\text{Zr}_{0.1}\text{O}_3$**
G Herrera, Centro de Investigación en Materiales Avanzados, Mexico
- 16:40 Closing remarks



Dielectrics 2019

Poster programme

- P1. Monitoring permittivity of cable insulation polymers using inter-digital capacitive sensors**
N Bowler, Università di Bologna, USA
- P2. Bond- graph input-state-output port-hamiltonian formulation of memristive networks for emulation of Josephson junction circuits**
S Hadjiloucas, University of Reading, UK
- P3. A modified maxwell garnett model: hysteresis in phase change materials**
N Green, University of Southampton, UK
- P4. Correlation between structure with dielectric and ferroelectric properties for the lead-free electro-ceramics based on $\text{Ba}_{1-x}\text{Ca}_x\text{Ti}_{0.9}\text{Zr}_{0.1}\text{O}_3$**
G Herrera, Centro de Investigación en Materiales Avanzados, Mexico